Presentism without Truth-Makers

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Abstract

We construct a presentist semantics on which there are no truth-makers for past and future tensed

statements. The semantics is not an expressivist or projectivist one, and is not susceptible to the

semantical difficulties that confront such theories. We discuss how the approach handles some

standard concerns with presentism.

1.   Location, Location, Location…

Many varieties of presentism have a Location Problem: truth-makers for statements about the

past, surprisingly (to say the least) turn out to be located in the present or in the eternal non-

contingent. This impugns the associated explanations of the truth of those statements. Typically,

the truth-makers raise other concerns: the ontology is baroque, or they just seem like the wrong truth-makers.[1]

To evade such problems, we must candidly recognize that there are no truth-makers for claims about the past: while there *were* facts about what is past, and there *will be* facts about what is presently future, there presently are none. We need a semantics on which past and future tensed statements do not share the fact-stating purpose of present tensed statements, but which captures the logic of tensed and tenseless discourse. We shall also need a story about how we justify tensed and tenseless statements, given that there is generally no fact of the matter about such statements' truth. To illustrate the general approach, we first consider a simple example of a non-truth-maker semantics.

2.   Consistency without Truth-Makers: The Example of Laws

Let's construe law statements as having no truth-makers. On this semantics, law statements do not have the purpose of describing the facts; their purpose is, in a sense to be elaborated, to predict and explain the facts. We can use this purpose, and the purpose of factual claims—describing the facts—to justify consistency relations for sets of law statements and sets of law and factual statements.

Consider two candidate laws for describing the force exerted on a particle of charge q by an electrostatic field, **E**:

[1]For developed criticisms along these lines see Sansom and Caplan 2010, and Merricks 2009, chapter 6.

It is a law that $\mathbf{F} = q\,\mathbf{E}$

It is a law that $\mathbf{F} = |q|\,\mathbf{E}$

The equation in each law determines the force for every possible pair of values for q and $\mathbf{E}$. Moreover, those possibilities function in explanations in the following way. For the former law, $\mathbf{F}$ is parallel or antiparallel to $\mathbf{E}$, depending on whether the particle is positively or negatively charged. For the latter, which features the absolute value of the charge, the force must be parallel to $\mathbf{E}$. Thus, on the former, the sign of the charge of the particle is explanatorily relevant to the direction of $\mathbf{F}$; on the latter, it is not—the direction of $\mathbf{E}$ dictates the direction of $\mathbf{F}$. So, *even if no negatively charged particle ever, actually, enters an electrostatic field, and hence, there is no predictive disagreement between these laws,* they cannot be coherently used for the purpose of explanation. So, {It is a law that $\mathbf{F} = q\mathbf{E}$, It is a law that $\mathbf{F} = |q|\mathbf{E}$ } is an inconsistent set. We might write the corresponding non-factual propositions as ordered pairs of content and associated purpose:

It is a law that $\mathbf{F} = q\mathbf{E}$ **=**   ⟨ $\mathbf{F} = q\mathbf{E}$; prediction and explanation⟩

It is a law that $\mathbf{F} = |q|\mathbf{E}$ **=**   ⟨ $\mathbf{F} = |q|\mathbf{E}$; prediction and explanation ⟩

The propositions are inconsistent, because their contents cannot be coherently used for (at least one of) the associated purposes.

The other purpose of such law statements is prediction of the actual facts; we demand they make no erroneous predictions. Thus, for example, { It is a law that $\mathbf{F} = q\mathbf{E}$, For some case $\mathbf{F} \neq q\mathbf{E}$ }, or {⟨ $\mathbf{F} = q\mathbf{E}$; prediction and explanation⟩ , ⟨ for some case $\mathbf{F} \neq q\mathbf{E}$; factual description⟩}, is an

inconsistent set, because the equation in the law statement has the purpose of infallible prediction and it fails that purpose for any world described by the factual claim.

The sketched semantics provides consistency relations, and thereby, an account of valid inferences regarding law statements and factual statements. Indeed, it can plausibly recover the intuitive consistency relations among law and factual statements. Notably, law statements are not reducible to non-nomic / factual statements. For instance, two sets of laws that disagree only in including one rather than the other of the above candidate law statements will be mutually inconsistent—since they support competing explanations—but predictively adequate to, and hence both consistent with, numerous factual worlds where no negatively charged particles enter electrostatic fields. So, there are no truth-makers for such law statements.

Further, we can tell a straightforward story about the justification of law statements in the absence of truth-makers. Intuitively, verifying for a broad variety of cases that the values of $\mathbf{F}$, q, and $\mathbf{E}$ conform to the equation in the law statement should justify commitment to an equation for prediction and explanation i.e., justify belief in a law. In particular, measurements on negatively charged particles in electrostatic fields will decisively disconfirm at least one of our candidates and may significantly confirm the other.

Note that the above semantics is not expressivist. Over the last couple of decades, a variety of challenging semantical problems have been raised both for Allan Gibbard's expressivism and Simon Blackburn's projectivism.[2] While these approaches are far from being

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[2] In addition to the venerable Frege-Geach problem, there are significant concerns about compositionality, negation, and other issues. See Schroeder 2008 for extended discussion of most of these concerns.

lost causes, identifying statements as expressing non-factual propositions regarding some purpose, as opposed to expressing states of mind, is a way of eliminating truth-makers while avoiding those problems. We shall now attempt a similar semantics for temporal discourse.

3. A Presentism without Truth-Makers

We begin with tensed statements. Present, past, and future tensed statements respectively have the following purposes:

<u>Description of the (present) facts</u>

<u>Retrodiction</u>: Understood not as description of the facts about the past, but rather as description of what the past facts *were*.

<u>Prediction</u>: Understood not as description of the facts about the future, but rather as description of what the future facts *will be*.

We can accommodate both the content and the purposes of tensed utterances via one technical device: a tensed utterance is equated with a set of worlds with a designated present—the set of worlds where the utterance holds. The designated present for a world associated with an utterance is the timeslice at which the utterance is made, and the set consists of worlds for which what is said holds at the relevant locations relative to the designated present. Thus, if I say "it is now raining in Glasgow" the set consists of the worlds at which it is raining in Glasgow on the designated present timeslice, where the designated present is simultaneous with the utterance. If I say "it will rain in Glasgow later today" the relevant worlds are those for which the designated

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present is again simultaneous with the time of utterance, and where it is raining in Glasgow at some time between the designated present and the end of the current day. In each case, it is understood that the content associated with times later than the designated present and earlier than the designated present respectively have the (non-factual) purposes of prediction and retrodiction.

The semantics for complex propositions is given in the standard way: a disjunction has as content the union of the sets of worlds associated with the disjuncts; conjunction is given by intersecting the sets of worlds associated with the conjuncts, and so on. The consistency relations for such propositions are straightforwardly given by the possible worlds construction: sets of propositions are consistent iff the members have at least one world in common.

Let's briefly discuss the consistency relation. Suppose I, looking at the thermometer, say "it's really hot now" and a few minutes later you say "it was really hot a few minutes ago when you looked at the thermometer". Do we disagree? On the above semantics, yes. My utterance expresses the proposition that at the time when I look at the thermometer it *is* hot, whereas you say that at the time when I look at the thermometer, it *was* hot. While we agree regarding what is or was happening at said time, we disagree about the location of the present. My statement says that time is present, yours that it is past. Neither utterance is mistaken: what I said was true when I said it, and what you said was true when you said it, but the statements are inconsistent—

that particular event cannot both be present and not.[3] This is hardly unexpected. For those who endorse a static block, there is no inconsistency, but for the presentist there must be.

Tenseless discourse does not discriminate between past, present, and future: its purpose is description of the facts and/or retrodiction and /or prediction, without regard to which subset of the set of three activities is being pursued. Thus, tenseless statements are consistent insofar as they do not disagree about any times: a disagreement about some time would constitute an incoherence in prediction and/or retrodiction and/or description of the facts. On a possible worlds semantics, tenseless propositions can be identified with sets of worlds with no designated present. However, to properly relate the semantics of tenseless claims to that of tensed claims, we equate each world with no designated present with the set of tensed worlds that have that history and differ only in that each has a different timeslice as designated present—each tenseless world corresponds to an equivalence class of tensed worlds under the relation "has the same history as" i.e., each "B-series world" corresponds to a set of "A-series worlds", the members of which cover all the different possible locations of the present for that B-series. As before, complex propositions have their contents specified through union, intersection, and complement operations on sets of world, and we define consistency of sets of propositions in terms of overlap of sets of worlds We have a unified semantics for A and B series claims, without past and future (or indeed any) truth-makers.

An account of the consistency relations between propositions specifies the associated logical truths and valid inferences.   However, since there are no truth-makers for such

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[3] Uses of "is true" are to be understood in a deflationary way throughout.

propositions, we need a story about how we might be justified in making tensed and tenseless utterances. Later, I will have a little more to say about causation and trans-temporal relations, but the outlines of the story about justification are commonsensical and mundane. We typically infer what the past was like and what the future will be like (and indeed what the present is like) from present evidence and trans-temporal generalizations, causal or otherwise. Our justification for believing such trans-temporal generalizations will consist of the standard evidence for such claims.

4. Some Concerns

Is the past just a fiction on this view? No, we cannot generally justify made up stories about what the facts were. Some stories about what the facts were are justified by the evidence, and some (including mere fictions) are not.

Nor is the view an unpalatable reductionism such as Ludlow's (1999) or Lukasiewicz's (1970) on which the past facts reduce to the present evidence. We don't need truth-makers for statements about the past to allow that our evidence could be misleading about what the past facts were. Pervasively wet ground around my neighbourhood is excellent evidence that it rained last night, but it might be that the local fire department went on a crazed street-hosing spree. My justified beliefs can be mistaken about what the past facts were.

If there are no past and future truth-makers, why are the possible histories restricted to those that contain only logically consistent future and past time slices? You don't need truth-makers to hold that, however the past was and the future will be, they were and will be logically

consistent times. We do not require a past time's existence to recognize a conflict between "It rained in New York at 5 p.m. yesterday" and "It did not rain in New York at 5 P.M. yesterday". They conflict, because there is no intelligible retrodiction that incorporates both.

More generally, propositions are structured objects, and the truth-maker driven need for ontology to fill out the structure of propositions about the past has led some presentists down rather baroque ontological avenues.[4] We admit structured propositions regarding the past, present, and future. Our possible worlds semantics—elaborated in the standard way to specify the meanings of predicates, names, etc., and the contents of propositions as a function of the meanings of those constituents—manifests that structure. But there are no truth-makers for such propositions, and no corresponding need for ontology corresponding to the propositions' constituents. As before, we are justified in making such assertions to the extent that we are justified in holding that things were, are, or will be as described: we are justified in asserting "the cat was on the mat" to the extent that we have good evidence that the cat was indeed on the mat. No weird ontological residue of past cats and mats required.

Our account relates the meanings of tensed and tenseless statements, not their (non-existent) truth conditions. This led to trouble for the old tenseless theory, which attempted to analyse the meanings of tensed statements in tenseless terms. If the meeting begins at 3 P.M., then on the old tenseless theory "the meeting begins now" and "the meeting begins at 3 P.M." mean the same. But clearly they don't: you could believe one, but not the other. However, such problems don't arise here. The former utterance corresponds to the set of worlds for which the

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[4] See, for instance, Keller 2004, for discussion of some of the options.

meeting's beginning is on the designated present time slice, which is the time of utterance. The latter corresponds to the set of worlds for which the meeting is on the 3 P.M. time-slice and where the designated present time-slice is arbitrarily varied, or if we factor in contextual factors regarding the scope of the speaker's ignorance about the time, where the designated present time-slice is at least allowed to vary across some temporal range. Thus, someone who does not know what time it is, might believe the former and not the latter, or vice-versa.

This account reduces tenseless statements to tensed. Since each tenseless world is an equivalence class of tensed worlds, we just need to make explicit the extra content associated with the tensed worlds. For example, the tenseless statement "It rains at 3 P.M. in Calgary on July 30 2014" can be rendered as "Either it rained at 3 P.M. in Calgary on July 30 2014, or it is raining at 3 P.M. in Calgary on July 30 2014, or it will rain at 3 P.M. in Calgary on July 30 2014". The analysis of other tenseless claims may be more complicated, but will proceed along similar lines.

On this view, there can be meaningful trans-temporal relational predicates, there just can't be trans-temporal relations. Let's briefly discuss causation, reference, and trans-temporal predication. First, laws and causation. Someone who offers the above semantics, and indeed attempts to make it seem palatable by exhibiting a similar non-factual account of laws, isn't going to be too worried about there being no real causal relations. However, non-factualism about the past and future, doesn't demand a further non-factual component to our story about causation or laws. A conventional Humean will reduce nomic facts to non-modal facts. On our presentist construal, the appropriate reduction is to what the facts were, are, and will be. Suppose I have a regularity view of laws like Lewis's Best System Analysis (BSA): roughly, the laws are the

generalizations in the simplest and most informative systematization of the true theory of what the facts were, are, and will be. There will be no truth-maker for such a theory, but we will have justified beliefs about such theories in the normal way. The laws will supervene on what the facts were, are, and will be. So, there's no "extra" non-factualism involved. Similarly, there is no problem in making a presentism- friendly reductive Humean analysis of causation.

Non-Humean views are compatible with presentism to the extent that they do not demand real trans-temporal relations. For instance, if properties are dispositions or powers, then A causing B could amount to the relevant disposition and stimulus being instantiated by A and the manifestation being instantiated by B. Primitive non-Humean laws instantiated at times, and other non-Humean options, need not demand trans-temporal relations.

We can accommodate reference to past entities as follows. On a causal theory, "Aristotle" refers to Aristotle (that individual that did exist, but no longer does) if there *was* an appropriate causal sequence that connected the historical Aristotle with contemporary uses of the name. Since discourse about the past is not ontologically committing, and the reference consists in a past causal connection to a past individual, holding that "Aristotle" refers is not ontologically committing. If we prefer a description theory, "Aristotle" refers to Aristotle if and only if the associated description correctly describes how that individual was. On either story, we can have justified beliefs about which terms refer and to whom, and again, there is no need of truth-makers.

Finally, let's briefly consider another trans-temporal predication (Sider 2001, p.25):

"Some (contemporary) American philosophers admire some ancient Greek philosophers."

This statement corresponds to a set of worlds where on the designated present there are American philosophers and on appropriately ancient timeslices there are Greek philosophers and the Admiration relational predicate is satisfied by some pairs of those Americans and Greeks. However, for presentists, the relational predicate cannot correspond to a real trans-temporal relation. We can understand *x admiring y* as a relation that holds between an agent, x, at a time and a referring expression, y, at that time, and we can understand reference in the terms specified above i.e. either in terms of past causal sequences that do not involve any trans-temporal relations, or in terms of descriptions that may or may not be successful retrodictions regarding the nature of past entities. So, no appeal to genuine trans-temporal relations is required.

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